Step 2: Current Use of Technology

Picture the audience response system of Jeopardy with its instant feedback and 100% involvement, and you can visualize students in my classroom reviewing for a test using our EInstruction Classroom Performance System (CPS). I show questions using a computer and overhead projector while students respond using their remote keypads. All students respond—not just the confident ones—in an anonymous fashion. I click a remote mouse and immediately project the number and percent of students who responded correctly. I then gauge student mastery and spontaneously adjust lessons to match the assessed needs of students. I utilize an hp computer and Toshiba projector for interactive, visual learning acquired from internet sites related to lessons. I use the CPS system and student remote keypads to gain immediate feedback on tests, quizzes, test review, lesson comprehension, and ISAT practice. A CPS wireless chalkboard allows me some additional flexibility to demonstrate concepts and involve students.

A review of relevant research to justify strategies for effective technology integration shows mounting evidence that educational technology can have a positive impact on student achievement (Honey, 2002; Valdez et al., 2000) Technology has become an essential element in my classroom.

Certain technological tools have the capacity to enhance students learning processes and proceed beyond traditional boundaries, creating an interesting and engaging environment. Currently, I present lessons using PowerPoint at least once a week because I believe it helps students in achieving and retaining comprehension of course material, as well as stimulating student interest.

Recently, I had the opportunity to aid in launching a school-wide reading initiative titled "Dream Big." Using digital video cameras with the support of imovie and green screen technology, student actors were transformed into storybook characters, such as Heidi, Mowgli and a President of the United States, to visually encourage students to read!

With a digital camera, a computer, and a group of Gifted and Talented students, I was able to produce a yearbook, capturing student activities and unforgettable memories. I'm hopeful this experience will spark interest in students to continue to work in the journalistic arts. *Studies show that students who participate in journalism perform better on ACT tests and AP exams (Dvorak, Lain, & Dickson, 1994).*

For the past five years, I have taught in our Park School Summer Academic Experience--designed to further challenge and motivate high achieving students. Again, along with a digital camera, countless creative students, and some captivating journalism skills, we produced a newspaper via the computer, which our local newspaper office printed and distributed as an insert in the local newspaper. The students also wrote, directed and acted out their own plays which were video-recorded, burned to DVD's and made available for each student to enjoy.

Besides the technology already addressed I daily use many other software programs to help challenge students at their individual ability levels. Programs used daily both in my classroom and in our computer labs include: Accelerated Reader, Accelerated Math, Math Facts in a Flash, Accelerated Grammar, PLATO and Academy of Reading.

My students are encouraged to set personal academic achievement goals that are tracked and scored with the above-mentioned programs. The students in my class and in this school are comfortable with technology and are excited about doing projects and assignments using technology that would otherwise be impossible.

Step 3: Impact on student performance

This Fall we invited a hot air balloonist to our school as part of our Dream Big initiative which involves encouraging academic goal setting and good citizenship. The hot air balloon soared over our school taking pictures of our students who were sitting on the hill in front of our school. We had lightly drawn large letters on the hill spelling out "Dream Big". Students sat on the letters, so that all of our students and staff spelled out Dream Big from the balloon's vantage point high above our school. A high school video class helped film this process from various angles. This footage will be used when we put together our next motivational video tying to our theme. Besides using much educational technology in classrooms, we have been producing short (4-5 minute) student involved, inspirational videos for three years now. Our ISAT scores have soared during this same period. Our students and staff buy into our overall theme for the year and because of this our students test scores improve dramatically each year.

It is difficult to put a finger on which technology, hardware, software or inspirational student video has had the most effect on student achievement, but we know that our scores school-wide have all improved dramatically as a result of good teaching, a spirit of cooperation, and the technology we've mentioned.

We are a 4th and 5th grade school with 240 students. The student demographics in our building and district include: 60% poverty level, 25% Hispanic, 74% caucasian and 18% LEP. Our primary school-wide goal for the past three years has been to reach the state average in areas that make a difference on AYP. We've also encouraged student behavior and Accelerated Reader goals through our student involved, inspirational video projects.

In the past three years our principal reports that discipline referrals are down 30%. Staff members surveyed gave primary credit to our Academy of Reading program and our Inspirational videos/assemblies. We have tracked Accelerated Reader points since 1998. These last four years are listed with our school-wide average points per student: 03-04—61; 04-05—73; 05-06—100; 06-07—124.

It is no secret that Park School uses technology for educational purposes more than any other building in our district. Our ISAT scores are the highest averages in our district when compared to grade level state data. By posting the below results, I mean no disrespect to our other district schools, but need to show this information to demonstrate how the use of technology has impacted student performance for the purposes of this grant opportunity. Scores are shown as the percentage of students proficient or higher. Our building includes 4th and 5th grades only. Numbers in bold below demonstrate areas where grade levels in our district scored above the state average.

Spring 2007 ISAT Scores

Reading	3rd	4th	5th	6th	7th	8th	10th
Weiser	74.8	**88.0**	**79.2**	64.4	67.0	82.9	69.6
Idaho avg.	80.8	80.6	78.5	77.4	77.0	85.8	78.8
Math	3rd	4th	5th	6th	7th	8th	10th
Weiser	83.7	**89.0**	**80.0**	73.7	62.0	62.8	64.7
Idaho avg.	86.3	82.0	73.0	74.7	70.0	71.7	72.7
Language	3rd	4th	5th	6th	7th	8th	10th
Weiser	41.7	**81.8**	64.8	43.4	48.8	47.3	50.0
Idaho avg.	66.5	80.0	68.8	67.4	64.9	61.8	64.2

Step 4: Enhancing Learning Opportunities for Students

Technology is an integral and growing part of daily living in the twenty-first century. The challenge in education is to use technology effectively to enhance learning opportunities and expedite the teaching of essential concepts. To meet this challenge, I am submitting this **"Treasure Hunt for Success"** proposal. I wish to use an emerging technological tool, *global positioning systems* (GPS) receivers, and an emerging GPS-based activity, *geo-caching*, to transform my classroom from a teacher-centered environment to an exciting, empowering, exploratory environment that focuses on student engagement in the learning process. I wish to be able to photograph student triumphs for use in classroom and school-wide PowerPoint demonstrations and videos to domino the effect of success. Patrons will also be able to observe some photos and videos online by going to Weiserschools.org, clicking on Visit our Schools, Park School and finding various student involved, inspirational videos. (Our latest video "Vision 07-08" will be available online for patrons by December 1.)

I propose to purchase the following to aide in accomplishing these goals: 1 Sony HandyCam SR42 30GB Camcorder; 1 Sony LCS-VCB Soft Carrying Case; 1 Sony VCT-R100 Floor Standing Tripod, 12 Garmin Etrex Vista HCX Handheld GPS units; Garmin MapSource Worldmap CD; Garmin Mapsource Metroguide N. America DVD; 12 Gilsson eTN-Neoprene case for Garmin Etrex; 1 ELMO P30 XGA Visual Presenter; 4 Sony DSC-T100 8.1 Megapixel Digital cameras; and 4 Sony Basic Accessory Kits.

If our **"Treasure Hunt for Success"** proposal is accepted**,** the requested equipment will help to interest and motivate students throughout various educational projects during the regular academic school year, Summer Academic Experience, and will aid the Gifted and Talented program. Students will learn how to use GPS units, an Elmo P30 XGA Visual Presenter, Sony Digital cameras and a Sony camcorder. Students will benefit on an everyday basis as I model researching and editing, present information, and reinforce concepts using the Classroom Visual Presenter. Using these tools and activities provides students with a curiosity about geography, science, language arts, mathematics and the world in which they live. They also create a learning environment that prepare students to: Communicate using a variety of media and formats; Access and exchange information in a variety of ways; compile, organize, analyze, and synthesize information; draw conclusions and make generalizations based on information gathered; know content and be able to locate additional information as needed; become self-directed learners; and collaborate and cooperate in team efforts.

Our current Weiser School District Technology plan spells out clearly that our staff is to "Assist every student to become technologically literate." Our technology plan recognizes that the future workforce with which we are working must know the basics of a variety of technology to be successful in their respective endeavors. Our technology plan clearly states that it is our responsibility as educators to provide the skills necessary for students to function effectively in an ever-advancing technological world. The technology literacy of our students will be enhanced every time the GPS units, Document camera, video and digital cameras are used.

English Language Learners make up 20% of my class population, and they will especially benefit from seeing and hearing simultaneously. I am pursuing this **"Treasure Hunt for Success"** idea to primarily support and enhance our core curriculum. But I also believe all learners need to experience hands-on learning with up-to-date technology to prepare for future occupations. As educators we need to do more than prepare for ISAT tests and prepare kids for life. Geo-caching, photographing, and videoing will provide engaging opportunities for everyone to learn history, math, science—and life--the possibilities are limited only by the imagination.

Step 5: Proposed Use of Technology in the Classroom

Students will use Global Positioning Satellite Units for:

- **Learning the concepts of latitude, longitude, and altitude** (Geography 2.1.3: Use latitude and longitude coordinates to find specific locations on a map.)
- **Marking waysite coordinates at the Oregon Trail Interpretive Center** (Geography 2.1.1 Develop and use different kinds of maps, globes, graphs, charts, databases, and models to display and obtain information; Science 5.2.1: Describe how science and technology are part of a student's life)
- **Marking waysite coordinates to track noxious weeds** (Science 5.1: Understand common environmental quality issues, both natural and human induced; 5.2 :Understand the relationship between science and technology; 5.2.1.)
- **Plot waypoints on a satellite map using Google Earth** (Geography 2.1.1)

With the reality of shrinking budgets and rising standards, how do I break through cultural and economic barriers to ensure that no child is left behind? How can I capture students' imaginations, help them find their place in the universe, and guide them on their journey through life? One technological solution is to integrate a challenging hide and seek element, geo-caching, into classroom lessons using GPS units. Applying latitude, longitude and altitude skills learned in my fifth grade classroom, students will search for specified caches. If this **"Treasure Hunt for Success"** proposal is granted, we will set up treasure hunts on our campus, so cooperative groups can work together to find clues and make maps. Students will feel they are playing while they are actually learning life skills in math, science, geography, and more. Our annual Oregon Trail field trip to the Baker City Interpretive Center will provide ample opportunities to enter and search for waypoints. Students will record areas in the handheld GPS units to track the location of a lode mining camp, native artifacts, an Indian massacre gravesite and other areas of interest. Finding multiple caches in a variety of locations will provide ample opportunity for students to photograph and video successes which will be used in our student involved inspirational videos.

Working together, students will strengthen personal communication, problem-solving skills and mathematical, scientific and geographic concepts while participating in a different type of geocache, a Multi-Cache, which is a series of multiple waypoints, each of which provide partial coordinates for the final cache's position. Hiking along the base of Flagstaff Hill over ruts of the Oregon Trail, students, divided into groups of three, will locate waysites using pre-set coordinates to locate an existing historical monument, plaque, or benchmark. Assigned the role of GPS handler, logbook keeper and photographer, the students will locate the cache while documenting the search using notes, photos, and/or video documentation.

Geo-caching is an inquiry-based learning technique which allows students to become problem solvers when placed in situations where he/she can draw on experience and prior knowledge to reach a goal. *There is an intimate and necessary relation between the processes of actual experience and education* (Rousseau, Pestalozzi and Dewey). Working together with our local Washington County Weed Control Department, students will identify Leafy Spurge, a noxious weed which thrives along the Weiser River Corridor. They will take photos and mark waypoints at various problem areas. Students will also become familiar with the insect, Apthona Leaf Beetle, imported from Montana, known to combat the weed problem. After observing the release of beetles at various waypoints, students will photograph the areas. Students will then plot coordinates on Google Earth. Future classes will return to the exact waypoints to photograph the area showing the impact of weed control without chemical applications.

With the additional motivation GPS units and the requested technologies provide, students will apply strategies for solving problems and using appropriate tools for learning, collaborating, and communicating. I hope that through the use of these important tools my students will become productive, successful citizens who ask questions, solve problems, communicate effectively, and inform themselves about local and global issues that affect their lives.

Qwest Foundation for Education Grant Expenditure Plan
(Standard IFARMS Budget Format)

Activity	100 Salaries	200 Benefits	300 Contractual Agreements	400 Materials and Supplies	500 Capital Objects	**TOTAL**
Sony HandyCam SR42 30GB camcorder					$549.99	$549.99
Sony LCS-VCB carrying case					$148.99	$148.99
Sony VCT-R100 floor standing tripod					$25.99	$25.99
Garmin Etrex Vista HCX handheld GPS 12 @ $236.22					$2,834.64	$2,834.64
Garmin MapSource Worldmap CD					$99.95	$99.95
Garmin MapSource Metroguide North America CD					$99.95	$99.95
Gilsson eTN neoprene case for Garmin Etrex 12 @ $9.95					$119.40	$119.40
ELMO P30 XGA Visual Presenter					$2,339.00	$2,339.00
Sony DSC-T100 8.1 megapixel digital camera 4 @ $379.99					$1,519.96	$1,519.96
Sony Basic Accessory Kit 4 @ $129.95					$519.80	$519.80
Energizer AA battery charger 5 @ $12.97				$64.85		$64.85
4-pack Energizer AA rechargeable batteries 6 @ $12.99				$77.94		$77.94
Shipping / handling @ 5%			$420.02			$420.02
TOTAL			$420.02	$142.79	$8,257.67	$8,820.48